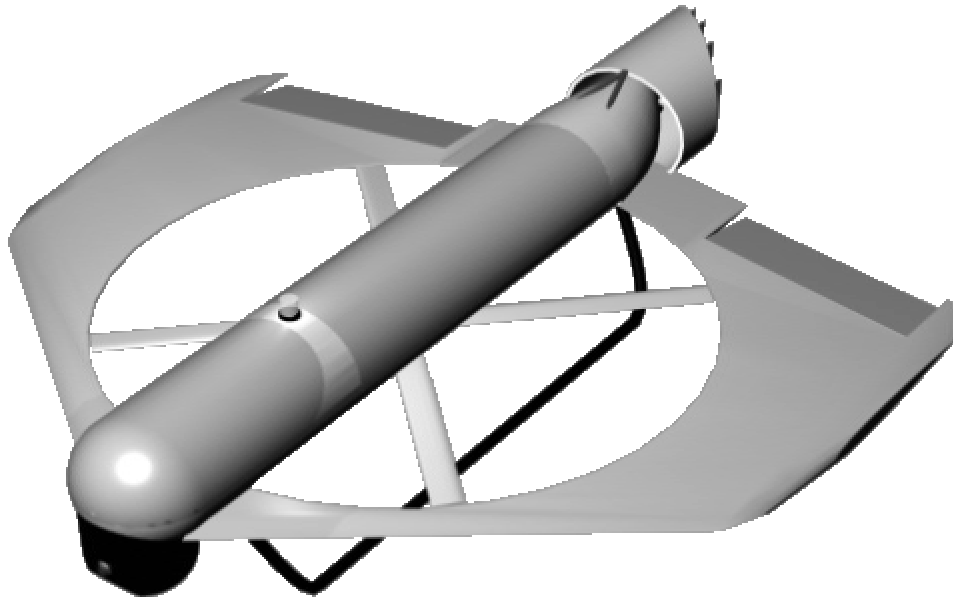




Dragon Warrior Project “In-Work”



A shipboard compatible fully autonomous vertical takeoff and landing Marine Infantry Division Regiment level UAV with an over the horizon capability.

Design Mission

Range 150 nm
TOT 1 hr

Description

Wing Shield Compound Helicopter
Ducted Thrust Vectoring Tail Rotor
Folding “wing” panels
Forward Mounted Camera Ball

Dimensions

Length (open) 108 in.
(folded) (same)
Width (open) 108 in.
(folded) 30 in.
Height 30 in.
Rotor Diameter 72 in.
No. Blades 4

Performance

Disk Loading 8.84 lb./ft²
Rated Power 35 HP
Empty Weight 168 lb.
Fuel Weight 57 lb.
Payload Weight 25 lb.
Gross Weight 250 lb.
Cruise Speed 100 kts



Dragon Eye Backpack UAV



- Will provide over-the-hill / over-the-next-building RSTA for platoons, squads, & fire teams
- Wearable ground control station
- Battery powered
- Speed: 35 kts, Endurance: 60 min
- Combat Radius: 10 km
- Package: 15" X 15" X 7" (attaches to load bearing vest)
- Gross Wt: 4.5 lb, Wingspan: 45 in





Micro Robotic Sensors



- MCWL working with DARPA, ONR, and NRL to develop more robotic sensors capable of providing intelligence and accurate real time targeting.
- Desired Characteristics:
 - Multi-spectral micro sensors that detect and track hostile forces thereby enabling an important RSTA function
 - Network centric micro sensor system capable of providing accurate intelligence and targeting data in an assigned battlespace.



ACASS

Advanced Close Air Support System



- ACASS development in FY01 includes the integration of a precision targeting device to support reconnaissance, surveillance, and targeting acquisitions and MOUT
- CAPABILITY:
 - Precision all-weather Close Air Support
 - Digital data transmission
 - Continuous display of aircraft ground track
 - Increased Situational Awareness for the FAC



PTS

Precision Targeting System



- Provides ground forces the precision target acquisition needed in STOM operations, particularly in a MOUT environment where accuracy is critical.

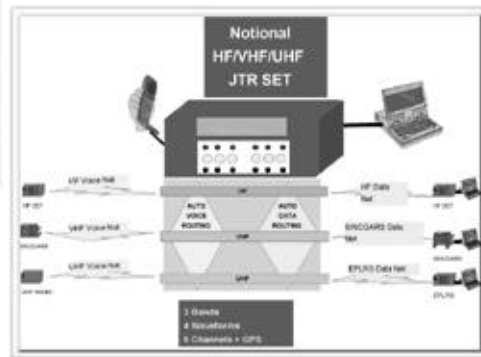
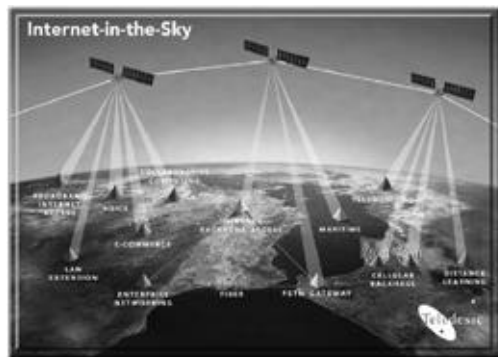
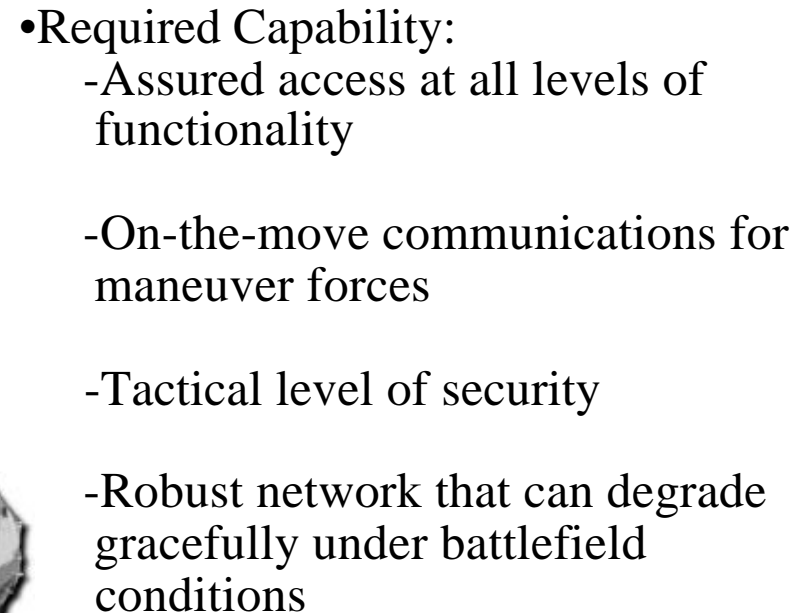
- Capability:

- Eye-safe, laser range finder with compass and inclinometer combine direction, distance, vertical angle to the target and GPS position to achieve 10-digit target grid coordinates

- Warfighting Enhancements:

- Timely and accurate target location
 - Rapid fire mission generation
 - Digital CFF connectivity to fire support assets





without the need for ground-based infrastructure

- Communications architecture that enables the concepts of Operational Maneuver From the Sea (OMFTS) and Ship to Objective Maneuver (STOM)



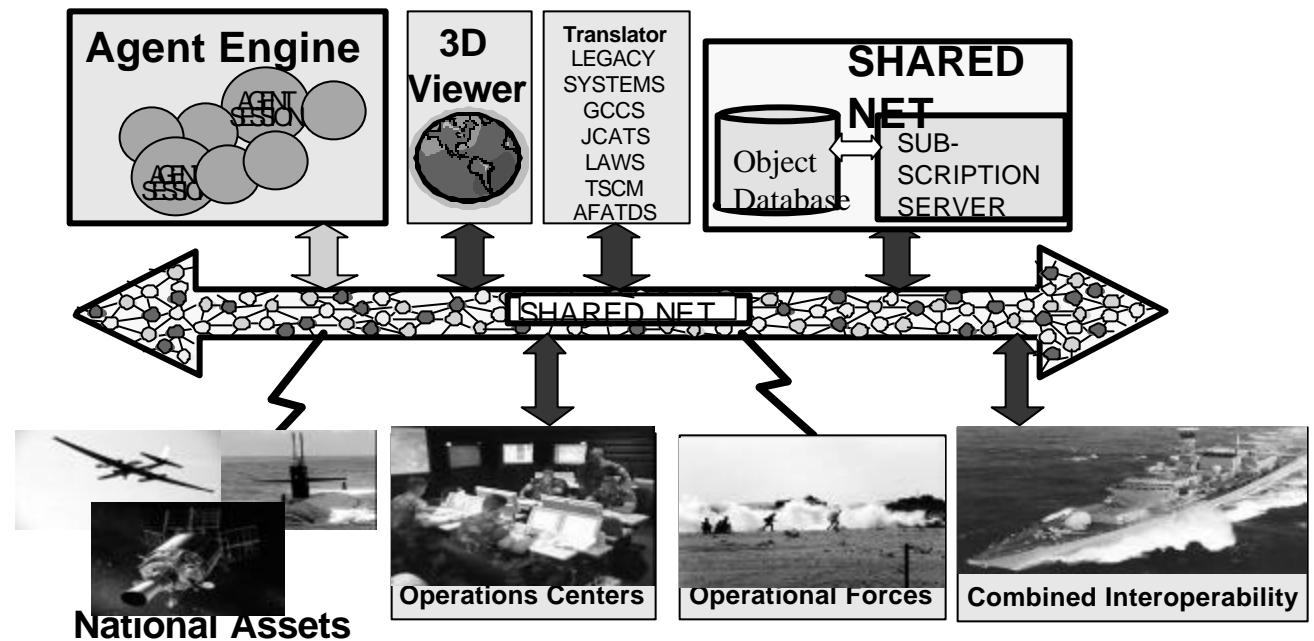
IT & C2



**End User Terminal
(EUT)**

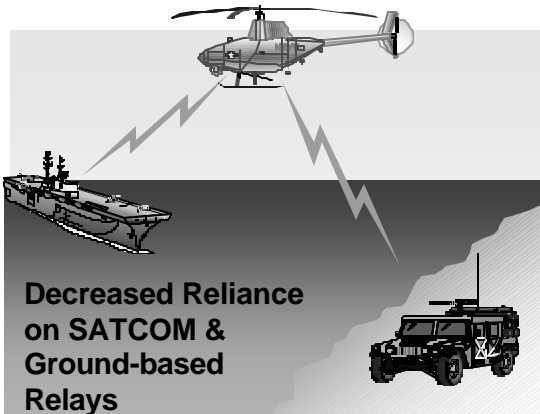


EUT Touch Pad

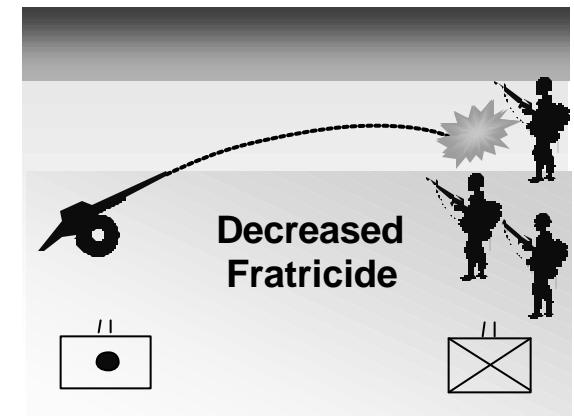
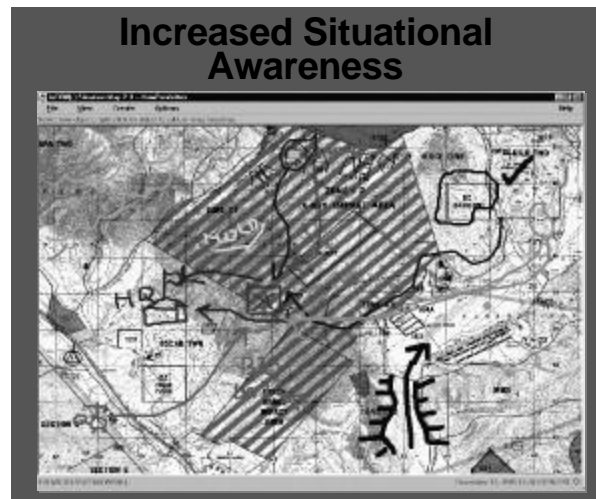


**Integrated Marine Multi-Agent Command
and Control System (IMMACCS)**

ELB/MCWL Collaboration



*Provide secure, high
bandwidth, wireless
connectivity to the squad level*



*Enable collaborative
planning between
dispersed elements
at sea or ashore*



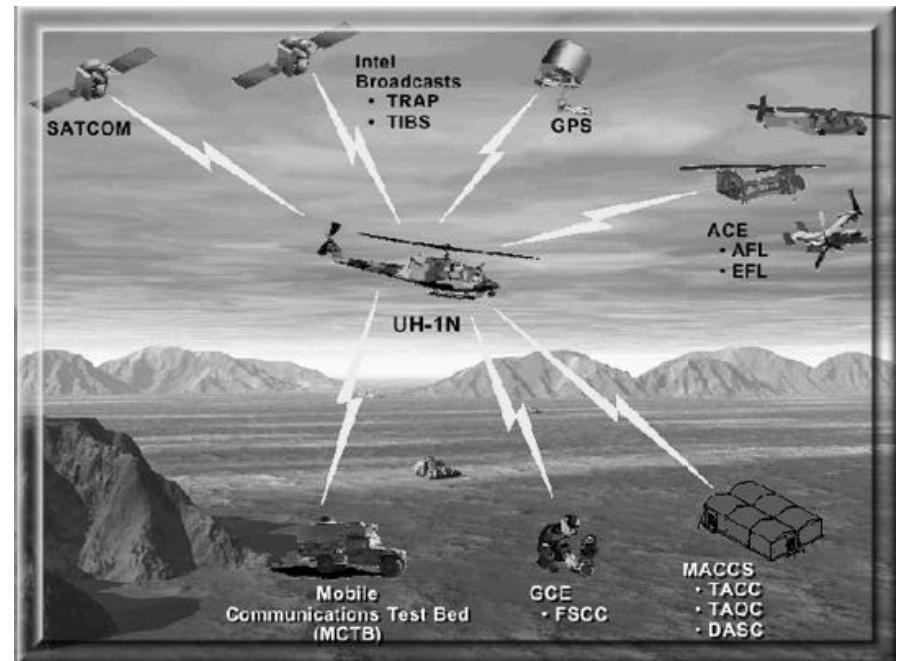
*ELB provides network,
MCWL provides
applications*



Marine Corps Airborne Command and Control System



- Provide the MAGTF with an airborne command and control system that features enhanced communications and situational awareness capabilities for the execution phase of a mission
- Key functional capabilities:
 - Communications, processing, and display of critical mission information for C² via voice, data, and video
 - Display of mission planning information - threat depiction; tactical overlays; preplanned routes; communications architecture
 - Commonality in communications, automation and information handling with other USMC C² systems
 - Interoperable with joint and allied forces





Other Technologies for the Warrior



Combat Decision
Range (CDR)



SEPs



GPADS



Night Vision Lab



Yodaville (Urban CAS Range)



21st Century Rifleman



“FAC Training Aid”
Simulated “Drone”
Close Air Support



“Super Batteries”
Fuel cell for long life

“No Hands Comm”
Bone contact microphone/speaker

“White Light/No Loss of Night Vision”
LED flashlight NVG friendly
IR capable

“Where am I?”
Mini COTS GPS

“Tactical Internet to Squads”
Wireless palm computer

“Pop-up Eyes”
Pop-up camera with parachute

“Scalable Water Purification”
Water purification cap on canteen





Questions?